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Breastfeeding Infants with Congenital Torticollis

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Abstract

Infants with unilateral sternocleidomastoid tension and associated craniofacial, spinal, and hip asymmetries may feed poorly. Anatomic and muscular asymmetry stress both biomechanics and state control, increasing the potential for difficulty latching and sucking. A combination of positioning modifications to allow the infant to maintain his or her comfortable head tilt and turn, supportive techniques to restore alignment of oral structures, and handling techniques to help activate the weak contralateral muscles have been effective in the author's practice. Lactation consultants can promote positioning and muscle activation strategies and encourage physical therapy referrals for infants who do not respond promptly to reduce the risk of craniofacial deformity and developmental problems.

Keywords

breastfeeding, breast refusal, craniofacial asymmetry, sucking behavior, torticollis

Background

Congenital torticollis is dystonic twisting of the neck by a sternocleidomastoid (SCM) muscle lesion.[1] The SCM tilts the ear toward the ipsilateral (same side) shoulder and turns the face toward the opposite shoulder. Mild cases may be positional, with minimal muscle tightness.[2] Palpable muscle tightness and restriction of head movement, particularly lateral flexion (side bending), characterize congenital muscular torticollis.[3,4] Severe cases are born with or develop a SCM pseudotumor consisting of myoblasts, myofibroblasts, mesenchyme cells, and fibroblasts in varied quantities and stages of differentiation or degeneration.[5] These 3 presentations (postural torticollis, congenital muscular torticollis, and sternomastoid tumor) are considered a continuum in the literature.[6] The electron microscope findings support a developmental derangement in the affected sternocleidomastoid muscle, perhaps due to a loss of normal movement-associated stresses on the muscle.[5]

Half of infants with torticollis have a history of constrained intrauterine position in the last weeks of pregnancy due to fetal length or malposition, including breech lie.[7-10] Unfavorable presentations increase the difficulty of labor and birth and contribute to the belief that torticollis reflects a birth injury.[4,11-13] Incidence depends on the diagnostic criteria and population. Chen et al[7] found that ultrasound detected SCM fibrosis more reliably than neck range of motion (4% vs 1%) and that infants with facial asymmetries were 22 times more likely to have a SCM tumor. Stellwagen et al[12] diagnosed 16% of 102 healthy newborns with torticollis by range-of-motion deficits. Normal newborns can rotate the ear past the shoulder and tilt the head 70 to 80 degrees. Craniofacial asymmetries can be subtle in infants and are frequently missed by physicians and families.[14] Infants with torticollis and facial asymmetry may have coincident spinal and hip asymmetries.[15,16] Figure 1 shows typical facial asymmetries associated with torticollis.

Physical therapy is most effective before 3 to 4 months of age, with fastest resolution in infants younger than 1 month old.[17] Even mild positional preference can predispose to plagiocephaly (cranial distortion).[18,19] Facial asymmetry progresses if SCM tightness is not released early; the 6-month facial growth spurt provides the best opportunity for complete remodeling.[20] Research supports handling with the weaker side up to activate the contralateral SCM along with frequent prone play[21] and passive stretching exercises done by parents or therapists.[6,10,22-24] Multidisciplinary treatment is recommended; sole focus on the biomechanical aspects of torticollis risks residual sensory-perceptual-motor alterations.[25]

Feeding Difficulties Associated with Torticollis

Unilateral breast refusal is common in infants with torticollis.[2,26-28] Wei et al[24] reported feeding difficulty in 2.4% of 170 cases. Wall and Glass[28] described a series of 11 infants with

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Figure 1. Infant with Torticollis.

Congenital right torticollis. Note the smaller right eye, shorter facial height on right, right shoulder pulled up in attempt to maintain head in midline, slight head tilt, mandible deviated leftward, and left frontal bone asymmetry. The cupped right ear is not visible in this photo.

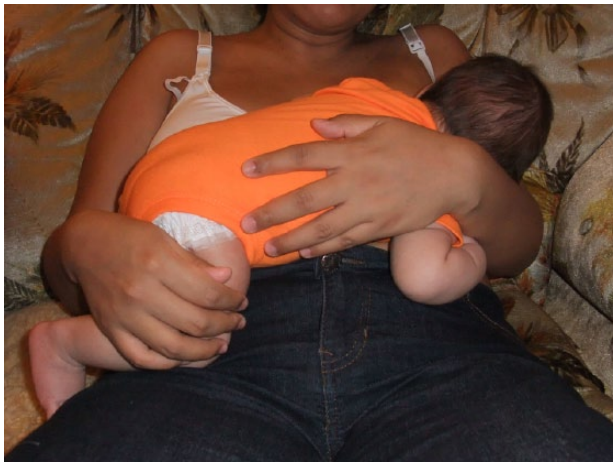
torticollis, mandibular asymmetry (jaw tilt), and breastfeeding issues. Montreal physicians and physical therapists who frequently treat torticollis reported weak suck, depressed reflexes, and sensory integration challenges in affected infants—all issues "related to the maturation and integrity of the central nervous system."[29] Karmel-Ross[18] characterized babies with torticollis posture as "fussy, irritable infants with poor self-calming skills and low tolerance for positional changes and stimulation." Reduced mobility increases the risk of severe plagiocephaly.[30]

Attachment

The mechanistic approach to positioning and latch (place tab A into slot B) can exacerbate breastfeeding difficulties. Infants are more likely to achieve comfortable stable positions if placed prone on their reclining mother.[31] Postpartum women respond to support for their intuition and language that paints a picture rather than "left-brain" lists of instructions. A right-brain approach[32] encourages the mother to wiggle with her infant until baby fits nicely against her body. Having baby hug the breast brings his or her hands, trunk, and face close and helps baby to organize and orient to the breast.[33] Several novel positions are helpful when torticollis causes the infant to twist away from mother:

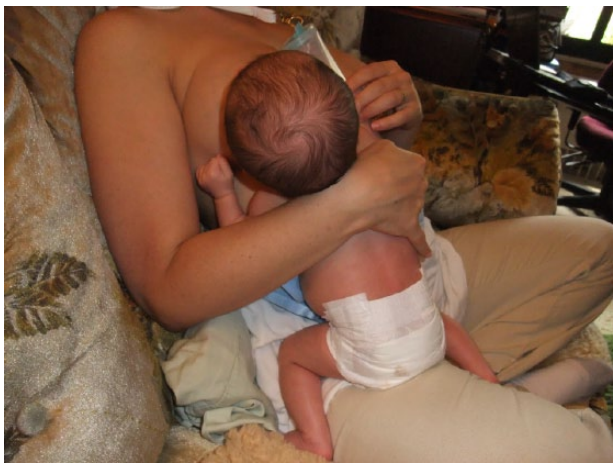
- Torticollis Tummy Twist: Turn the infant's lower body so the abdomen rests against the mother's thighs, which rolls the infant's head and trunk toward the mother (Figure 2).
- Spiderman (Hip Straddle): Sit baby against mother's hip and allow the head to rotate toward mother's center. Encourage mother to use her arm as a guardrail, not a restraint (Figure 3).
- Belly Sit: Straddle the infant's legs around mother's abdomen; baby sidebends toward the breast (Figure 4).
- Arm Lie: Rest the infant's head on mother's arm to facilitate breastfeeding while sidelying (Figure 5).

Figure 2. Infant in Modified Cradle Hold with Ventral Surface against Mother's Thighs.



Tummy twist position.

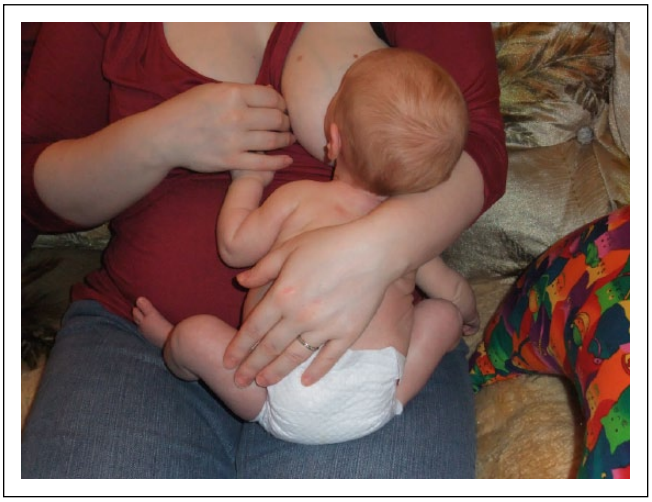
Figure 3. Infant Straddling Mom's Side/Hips.



"Spiderman" hip straddle.

These positions allow the infant to maintain his or her asymmetrical head position during feeding, particularly the tilt. Different positions will be necessary for the contralateral breast. Other options include the La Leche League "slide over" trick (starting the baby in the favored position on the favored side and then translating him or her across the mother's body without flipping or rotating, so the baby is in the

Figure 4. Infant with Legs around Mom's Belly.



Belly sit—the infant's legs straddle mother's abdomen.

Figure 5. Mother and Infant Breastfeeding in Sidelying Position.

Laying the infant's head on the mother's upper arm tilts the baby's head.

exact same position at the other breast) or use of a football/clutch hold (baby snuggled along mother's side by her ipsilateral arm) on the more difficult breast.

Sucking and Suck:Swallow:Breathe Coordination

The SCM is strongly activated during breastfeeding and helps provide the power for mandibular excursions in creating suction[34] and acts as an accessory respiratory muscle (pulling the ribcage upward). Restriction can contribute to weak suck and poorer aerobic capacity in infants with torticollis. Two infants with torticollis in the author's practice who could sustain only short sucking bursts (3-5 sucks per burst) have been diagnosed with a mildly narrowed nasal airway on the affected side by different otolaryngologists. Short, frequent feedings, prone positioning with head extension to open the airway, and pressure on the breast to block some ducts during milk ejection can help infants struggling to swallow safely.[35] Keeping the mother and infant organized by reducing environmental stimuli and maintaining a calm, empathetic demeanor also helps conserve resources for feeding.

Infants with facial asymmetry may have oral motor difficulties. Cheek, lip, and jaw function can be compromised on the weaker side. If there is a gap at the corner of the mouth, close the gap by pressing into the cheek with a fingertip with gentle traction toward the breast. A good seal is vital for producing intraoral pressures responsible for milk transfer.[36,37] Jaw support may help infants with mandibular asymmetry and weak jaw movements.[28] For infants with a "popping" temporomandibular joint, fingertip pressure in front of the tragus (inner flap) of the ear can help the anterior disk glide rather than dislocate and increase the amount of milk the baby can obtain. Severe jaw tilt destabilizes the tongue. Sublingual support (pressure with a fingertip under the soft sublingual muscles with gentle traction upward into the mouth and forward toward the breast) can improve the tongue's base of support in midline. It may take some experimentation to determine which supportive technique is most effective. Deep, slow (1 per second), drawing (open-pause-close) sucks in a sustained burst of 10 or more in infants without respiratory challenges signify successful intervention. Photos of these supportive techniques can be viewed at http://cwgenna.com/clinicalcornerpage.html.

Counseling Parents

Mothers of infants with torticollis generally report that their infant felt "stuck" during the last weeks of pregnancy and/or that the birth was difficult. The lactation consultant can use the birth history to connect the baby's intrauterine position and the muscle imbalances that are making feeding difficult and encourage parenting practices that calm the infant and mobilize the head and neck. These include frequent carrying, tummy time on an adult's chest, interactive play to elicit active movement to both sides, and repositioning the infant's head during sleep. Swaddling or use of baby seats outside the car immobilizes the infant and exacerbates negative sequelae.[38] Infant soothing methods including breastfeeding, massage, and rocking help organize the infant without constraining movement. It may take finesse to encourage timely treatment without frightening the family. Focusing on the potential for improved feeding and organization as muscle balance is restored with active movement serves this end. Although lactation consultants may recommend bodywork for infants with torticollis, research on modalities other than physical or occupational therapy is limited.[39,40] Infants who fail to improve substantially after a month of any treatment

require referral for active physical therapy to reduce the risk of persistent craniofacial asymmetries and loss of range of motion.[41] More research is needed to identify interventions that best support normal feeding, sensory processing, and musculoskeletal function.

Conclusion

Congenital torticollis and the associated muscular and bony asymmetries can make alignment for attaching and feeding at the breast challenging. Proposed techniques include positions that allow the infant to maintain his or her head tilt and turn while breastfeeding along with methods to provide support to weak or destabilized structures. When the infant is not feeding, positions and activities that facilitate active movement should be promoted. Communication with both the parents and health care provider is vital to ensuring proper treatment.

Author's Note

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